TECHNICAL BRIEF

WHY CHOOSE MODINE COILS?

WHY RAVEN SUPPLY IS YOUR GO-TO FOR COILS?

Introduction

When it comes to commercial and institutional HVAC performance, coil selection is a mission critical decision, one that shouldn't rely on matching physical size alone. At Raven Supply, we partner with Modine to deliver engineered coil solutions that prioritize thermal performance, life cycle cost, and long-term reliability. Our team adds unique value by offering on-site measurements and expert consultation, supporting successful installations at high-profile sites like St. Paul's Hospital and Simon Fraser University.

The Pitfall of Relying on Dimensions

- Correct Coil Selection Is About Duty, Not Just Dimensions.
- Identical coil dimensions do NOT guarantee identical performance.
- Coils with the same length, width, and height might differ in key internal attributes such as:
  - Number of rows
  - Fin density
  - Circuiting pattern
  - Tube diameter and wall thickness
- These factors directly impact BTU/hr ratings and system pressure drop.
- Choosing coils by size alone can result in poor heat transfer, operational inefficiency, and maintenance problems.

Modine's Performance-Based Sizing Approach

- Modine's certified coil selection software and engineering experts size coils based on:
  - Entering and leaving air/water temperatures
  - Desired temperature differential
  - Fluid and air flow rates
  - Static pressure limitations
- This ensures precise thermal performance, even for complex retrofit projects or unique system demands.

Material Quality & Options

- Materials: Copper tubes, aluminum fins, 316L stainless steel casing, and optional high-performance coatings.
- Proprietary coatings provide corrosion resistance—critical for challenging environments.
- Traceability and consistent sourcing guarantee the integrity and longevity of every coil.
- All coils are pressure-tested at 315 psig submerged in warm water to ensure leak-free operation.

Modine Coils Performance and Benefits

Feature	Modine (Average, including a 1-year warranty)
HVAC Water Coil Life	15–20 years
Steam Coil Life	10–15 years
DX/Evaporator Coil Life	10–15 years

*Typical service life expectations are based on Raven field experience in institutional environments (healthcare and post-secondary). Actual performance depends on operating conditions, water/steam quality, corrosion exposure, and maintenance.

- Engineering Legacy: Over a century of heat transfer experience.
- OEM Trusted: Preferred by leading HVAC and equipment manufacturers.
- Full Certification: AHRI, UL, and optional ASME and CRN certifications for code compliance.
- Fast Delivery: 1-, 2-, and 5-day expedited options available for critical replacement needs.

The Raven Supply Advantage

Full-Service Consultation

- On-Site Measurement: Our team visits your site to precisely measure coil requirements, removing the risk of incorrect replacements and costly rework.
- Project Experience: We've supported successful coil upgrades for sites like St. Paul's Hospital and the SFU campus, where Modine coils operate reliably 15+ years after installation.
- Seamless Process: With custom coil selection templates and direct communication with Modine engineering, your project moves efficiently from sizing to shipment.
- We support emergency replacement timelines with 1-, 2-, and 5-day turnarounds when required.

Range of Solutions

- Evaporator coils
- Condenser coils
- Chilled water/fluid coils
- Steam coils
- Duct/booster coils (note: booster coils are uncased and versatile for unique ductwork configurations)

Product Robustness

- Casings: Die-formed, heavy-gauge continuous galvanized steel for superior strength. (316L S/S, aluminum, Galvanized Steel)
- Tubes: Seamless copper, staggered in airflow direction to maximize heat transfer.
- Fins: Rippled, die-formed aluminum plate, providing full tube contact for efficiency.
- Red brass MPT or custom (swing, FPT, butt weld, etc.) to suit site conditions.
- Warranty: 1-year against material and manufacturing defects.

CONCLUSION

Sizing, material selection, and trusted engineering separate Modine coils provided by Raven Supply from generic alternatives. Choosing Raven ensures your coil will meet site-specific performance standards, provide decades of reliable operation, and deliver peace of mind through strong engineering support and rapid fulfillment.

For more information or to request a site visit, contact Raven Supply your local Modine coil experts.

Recommended Engineering Approach:

We recommend specifying engineered coils, not ‘match the dimensions only’ replacements, to protect performance, lifespan, and safety.

Raven partners with Modine to deliver those engineered coil packages.

Coil Construction Information

Below are common construction options available through our coil partners for both hydronic/fluid coils and steam coils. This flexibility lets us match site duty, materials, and code requirements:

HEATCRAFT FLUID COIL CONSTRUCTION

Tubing	3/8” or 1/2” O.D. Copper, 5/8” O.D. Copper, Cupronickel, Stainless Steel
Circuiting	Quarter, Half, Three Quarter, Single, One and one half, Double, Triple or Custom
Rows	1, 2, 3, 4, 5, 6, 8, 10, or 12
Fin Surface	Sine Wave (corrugated), New Ripple (peak and valley) or Flat
Casing	Galvanized Steel, Stainless Steel, Copper or Aluminum
Connections	Carbon Steel, Stainless Steel, Red Brass, or Copper Sweat (MPT, FPT, Victaulic, Grooved or Welded)
Vents & Drains	Standard on all coils.

HEATCRAFT STEAM COIL CONSTRUCTION

Tubing	Copper, Cupronickel, or Stainless Steel
Core	Free Floating designed to expand and contract in the casing
Rows	1 or 2 (5/8” only)
Fin Surface	Sine Wave (corrugated), New Ripple (peak and valley) or Flat (5/8” only)
Casing	Galvanized Steel, Stainless Steel, Copper or Aluminum
Connections	Carbon Steel, Stainless Steel, Red Brass, or Copper Sweat (MPT, FPT, Victaulic, Grooved or Welded)
Vents & Drains	Standard on all coils